



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,076	01/16/2002	Kouta Kitamura	Q67880	2429

7590 08/21/2003
SUGHRUE, MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

PRUCHNIC, STANLEY J

ART UNIT	PAPER NUMBER
----------	--------------

2859

DATE MAILED: 08/21/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,076

Applicant(s)

KITAMURA ET AL.

Examiner

Stanley J. Pruchnic, Jr.

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of Claims 7-12 in Paper No. 6 is acknowledged.
2. Claims 1-6 and 13-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention(s), there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.
3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

5. The abstract of the disclosure is objected to because:
 - It should be a single (1) paragraph.
 - In Line 2, "above mentioned requirement" is confusing. Since this is the first sentence, nothing has yet been mentioned. The abstract should stand alone, without referring to the rest of the disclosure.
 - In Line 7, "mounted in piles" is idiomatic and/or confusing.

Art Unit: 2859

- In Lines 9 and 15, "welding hone" appears to be a spelling error. Perhaps delete "hone" and replace therefor --horn-- in order to clearly describe the invention.
- In Line 9, the word "supersonic" appears to be translated incorrectly. Perhaps the word --ultrasonic-- more clearly describes the invention and was intended in this context. The word "ultrasonic" is understood to be more commonly used regarding vibrational frequencies, such as in "ultrasonic welding".

Correction is required. See MPEP § 608.01(b).

6. The disclosure is objected to because of the following informalities:

- a. On Page 24, in Line 19, the sentence should end with a period (.).
- b. On Page 33, in Line 18, perhaps "(zig)" should be deleted and replaced therefor by --(jig)-- in order to correct an apparent spelling error.

Appropriate correction is required.

7. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:

- On Page 14, in Line 5, the "hearing pan";
- On Page 14, in Line 7, the "supersonic wave" (perhaps should be --ultrasonic--?);
and
- On Page 24, in Line 19, "blazonry" and "poshness".

Art Unit: 2859

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 8, 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 8: the phrases "at the position where face to..." and "the light vertical to said detecting part" in the last two lines are ungrammatical and make the claim language confusing because Applicant's intention is not clearly indicated. In Line 2, "the position" lacks antecedent basis.

Are the light-emitting means and light-receiving means intended to be collocated at the same position or can they be at different positions?

The term "face to" in claim 8 is considered to encompass the meaning wherein both "said light-emitting means and said light-receiving means are disposed at a single position where they face said detecting part formed on said rotor" and also wherein they may be at different positions.

The term "vertical" in claim 8 is considered to mean that "an emitted light beam is perpendicular to a surface of said detecting part", but this is not clearly indicated.

Art Unit: 2859

Regarding Claim 11: Claim 11 provides for the use of the detecting part, being a depression “which is used for escaping an air”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Regarding Claim 12: Claim 12 provides for the use of “light-emitting *means*”, “light-receiving *means*”, and “*the time period* expended while the irradiated light from the light-emitting means is received at said light-receiving means”, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

With respect to claim 12: it has been held that to be entitled to weight in method claims, the recited structural limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure. Ex parte Pfeiffer, 1962 C.D. 408 (1961).

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 7-9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Pat. No. 5,497,080 (**KIM**).

KIM discloses a rotation sensor, which detects the rotation of a rotor 10, as claimed by Applicant in Claims 7-9, 11 and 12, comprising:

light-emitting means 20 (Col. 2: Lines 2-8), which emits a light to a detecting object 11 which rotates with the rotation of said rotor 10, (and **KIM** further discloses said detecting part is a depression, recess 11, formed on said rotor as Claimed by Applicant in **Claims 9 and 11**), and

light-receiving means 20, which receives the light emitted from said light-emitting means 20 as claimed by Applicant in **Claim 7**.

Further regarding Claim 8: **KIM** discloses that said light-emitting and light-receiving means 20 are disposed at the position "where face to the detecting part formed on said rotor", as claimed by Applicant (see Fig. 2; that is, the light sensor 20

Art Unit: 2859

faces the recess 11), and "the light vertical to said detecting part is emitted from the light-emitting means", i.e., the light path from the emitter to the object and back to the receiver is oriented vertically to the plane of the rotor in which the recess 11 (depression) is located.

Further regarding Claim 9: KIM discloses that said detecting part is a depression 11 formed on said rotor, and said light-receiving means receives the light, which is emitted from said light-emitting means and reflected by said depression (Col. 2: Lines 2-8).

Further regarding Claim 11: KIM discloses that said rotor is a reel 10 for winding a magnetic tape (Col. 1, Lines 13-40), and said detecting part is a depression, which is formed on the inside of the flange part of said reel 10.

Regarding Claim 12: The limitations of this claim are met in the normal use of the apparatus described by KIM as the rotation sensor of KIM is composed of:

light-emitting means 20, which emits a light to a detecting object 11 which rotates with the rotation of said rotor, and

light-receiving means 20, which receives the light emitted from said light-emitting means, and wherein rotation of the rotor 10 is detected based on the time period expended while the irradiated light from the light-emitting means is received at said light-receiving means.

Although KIM does not explicitly indicate that said rotation is detected based on the time period as claimed by Applicant, this limitation is considered an inherent requirement of the device disclosed by KIM, since KIM discloses that the device is a

Art Unit: 2859

rotation velocity sensor, and velocity is the time rate of change of the sensed position of the detecting object 11.

With respect to the intended use of the apparatus, *i.e.*, "for an ultrasonic-welding apparatus": It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Furthermore, the intended use is recited in the preamble. The functional limitations recited in the preamble which have structural implications have been given patentable weight because, although it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)), in this instance, the description in the body of the claim draws life and meaning from the functional limitations in the preamble, but only to the extent that they are required: thus the rotation sensor must be capable of use in combination with an ultrasonic-welding apparatus.

13. **Claims 7, 8 and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by **ABE et al.** (U. S. Pat. No. 4,894,533, hereinafter **ABE**).

Regarding Claim 7: **ABE** discloses a rotation sensor, which detects the rotation of a rotor 1, as claimed by Applicant in Claims 7, 8 and 10, comprising:

light-emitting means 8, which emits a light to a detecting object 1b which rotates with the rotation of said rotor 1, and

light-receiving means 9, which receives the light emitted from said light-emitting means 8.

Art Unit: 2859

Further regarding Claim 8: ABE discloses that said light-emitting means 8 and light-receiving means 9 are each disposed at a position "where face to the detecting part 1b formed on said rotor", as claimed by Applicant (see Figs. 1-2; that is, each faces the hole 1b), and "the light vertical to said detecting part is emitted from the light-emitting means", *i.e.*, the light path from the emitter 8 to the object 1b and then through the hole 1b to the receiver 9 is oriented vertically to the plane of the rotor in which the object 1b is located.

Further regarding Claim 10: ABE discloses that said detecting part is a hole 1b formed on said rotor 1, and said light-receiving means receives the light, which is passed through said hole.

With respect to the intended use of the apparatus, *i.e.*, "for an ultrasonic-welding apparatus": It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Furthermore, the intended use is recited in the preamble. The functional limitations recited in the preamble which have structural implications have been given patentable weight because, although it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA 1951)), in this instance, the description in the body of the claim draws life and meaning from the functional limitations in the preamble, but only to the extent that they are required: thus the rotation sensor must be capable of use in combination with an ultrasonic-welding apparatus.

Art Unit: 2859

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related rotation sensors and methods.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanley J. Pruchnic, Jr. whose telephone number is (703) 306-5474. The examiner can normally be reached on weekdays (Monday through Friday) especially from 8:30 AM to 11:00 AM and 12:00 PM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. F. Gutierrez can be reached on (703) 308-3875.

The **Official FAX** number for Technology Center 2800 is (703) 872-9318 for **regular** communications and (703) 872-9319 for **After Final** communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2800 receptionist whose telephone number is (703) 308-0956. The Technology Center 2800 Customer Service fax phone number is (703) 872-9317.



**DIEGO F. F. GUTIERREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**

**CHRISTOPHER W. FULTON
PRIMARY EXAMINER**

See

Stanley J. Pruchnic, Jr.
8 August 2003